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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,590	01/09/2002	Michel G.M. Perbost	10991396-2	6342

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
P.O. Box 7599  
Loveland, CO 80537-0599

EXAMINER
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TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/043,590

Applicant(s)

PERBOST ET AL.

Examiner

MY-CHAU T TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 29-37 is/are pending in the application.
- 4a) Of the above claim(s) 37 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Status of Claims*

1. Applicant's response filed 4/1/04 is acknowledged and entered.
2. Claims 29-37 are pending.
3. This application is a divisional of 09/426,823 filed 10/22/1999.

### *Election/Restrictions*

4. Upon further reconsideration with regard to restriction of Group I (Claims 29-35) and Group II (Claim 36), Group II is rejoined with Group I. Thus, Group I is claims 29-36.
5. However, Group III (Claim 37) is not rejoin with Group I because Group III (product) is distinct from Group I (process of use) the product as claimed can be used in a materially different process of using that product such as the process of coating a metal substrate. Thus the restriction requirement is still deemed proper and is therefore made **FINAL**.
6. Claim 37 is withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to *a nonelected invention*, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper filed 10/10/2003.
7. Claims 29-36 are treated on the merit in this Office Action.

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***Withdrawn Rejections***

8. The previous rejection under 35 USC 112, first paragraph (written description) has been withdrawn.
9. The previous rejections under 35 USC 112, second paragraph, have been withdrawn.
10. The rejection of claim 29 under 35 USC 102(b) as anticipated by Cozzette et al. (US Patent 5,063,081) has been withdrawn.

***Response to Arguments***

11. Applicant's arguments with respect to the withdrawn rejections have been considered but are moot in view of the new grounds of rejections.

***New Rejections***

***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 29-36 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (This is a written description rejection)

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Both of the instant claims 29 and 36 recite the method of using a non-miscible fluid (NMF). Claim 29 recites the method of using NMF for fabricating a biopolymer array and Claim 36 recites the method of using NMF for shielding biosynthesis reactions and sensitive biosynthesis reactants. The NMF is inert, immiscible and insoluble in aqueous solution.

The specification disclosure does not sufficiently teach the broad genus of compound (i.e. NMF) for use in the presently claimed method. The claimed compound (NMF) would encompass an infinite number of compounds such as silicone oil, petroleum jelly, or epoxy since no distinguishing structural attributes are provided for the claimed compound (NMF) other than its functionalities (i.e. NMF is inert, immiscible and insoluble in aqueous solution).

The specification description is directed to the properties of NMF (see pg. 19, lines 7-20, and pg. 28, lines 1-10). Additionally, the specification disclose on pg. 21 (Table 1) listed fifteen possible type of NMF. This method clearly does not provide an adequate representation regarding the broad genus of NMF (compound). Thus the specification does not teach the broad genus of compound (i.e. NMF) for use in the presently claimed method.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.).

With the exception of the NMF listed in Table 1 of the specification, the skilled artisan cannot envision the broad genus of compound (i.e. NMF) for use in the presently claimed

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method. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for using it. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (CAFC 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016. In Fiddes v. Baird, 30 USPQ2d 1481, 1483, claims directed to mammalian FGF's were found unpatentable due to lack of written description for the broad class. The specification provided only the bovine sequence.

Finally, Cf. University of Rochester v G.D. Searle & Co., Inc., Monsanto Company, Pharmacia Corporation, and Pfizer Inc., No. 03-1304, 2004 WL 260813 (Fed. Cir., Feb. 13, 2004) held that:

*Regardless whether a compound is claimed per se or a method is claimed that entails the use of the compound, the inventor cannot lay claim to that subject matter unless he can provide a description of the compound sufficient to distinguish infringing compounds from non-infringing compounds, or infringing methods from non-infringing methods.*

In the present instance, the broad genus of compound (i.e. NMF) for use in the presently claimed method is not taught by the specification. Therefore, only the method of using the NMF listed on Table 1, but not the full breadth of the claim method meet the written description provision of 35 U.S.C 112, first paragraph.

14. Claims 29-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a) It is unclear as to how the biopolymer links to the surface when the surface is 'covered' with the non-miscible fluid (NMF) as claimed in claim 29. The specification

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disclosure on page 19 (lines 10-11) defines the NMF is inert as being “*not chemically reactive with the biopolymer, reagents, anhydrous solvent or other ancillary materials*”. Since the surface is covered with NMF prior to the linking of the biopolymer to the surface, it is unclear how would the biopolymer diffuse or pass through the NMF such that the biopolymer can link to the surface. Furthermore, applicant arguments are regarding the properties of the NMF, which is persuasive. However, the instant claim 29 method steps do not recite how the biopolymer passes through the NMF such that it can link to the surface.

b) Claim 31 is vague and indefinite because it is incomplete. Claim 31 recites “wherein the biopolymers are deprotected and in an aqueous solution”, which is incomplete because the biopolymers are deprotected and “what?” in an aqueous solution.

c) Claim 33 recites the limitation “the loaded solution” in line 1. There is insufficient antecedent basis for this limitation in the claim 32.

### ***Claim Rejections - 35 USC § 102***

15. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

16. Claims 29, 31, and, 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Pease et al. (US Patent 5,599,695).

Pease et al. disclose a method of synthesizing an array of polymers (col. 1, lines 50-63; col. 2, lines 20-27). The method comprises the steps of applying barrier materials (NMF) onto

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the surface of the substrate and attaching the polymers onto the surface (col. 10, lines 10-21; col. 11, lines 1-26; col. 13, line 59 to col. 14, line 14). The barrier material comprises materials such as oil, silicone oil, or lacquer (col. 12, line 50 to col. 13, line 11). The polymers are applied to the substrate for linkage via printing method such as ink jet printing (i.e. loading the reactive (deprotected) polymer into the ink jet printer and injecting onto the substrate for linkage) (col. 10, lines 22-36; col. 12, lines 38-49; col. 13, lines 59-63). Therefore, the method of Pease et al. anticipates the presently claimed method.

17. Claims 29, 31, and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Pease et al. (US Patent 5,831,070).

Pease et al. disclose a method of synthesizing an array of polymers (col. 1, lines 53-65; col. 2, lines 22-29). The method comprises the steps of applying barrier materials (NMF) onto the surface of the substrate and attaching the polymers onto the surface (col. 10, lines 23-39; col. 11, lines 16-44; col. 14, line 10-32). The barrier material comprises materials such as oil, silicone oil, or lacquer (col. 13, line 10-29). The polymers are applied to the substrate for linkage via printing method such as ink jet printing (i.e. loading the reactive (deprotected) polymer into the ink jet printer and injecting onto the substrate for linkage) (col. 10, lines 40-54; col. 12, lines 56-67; col. 14, lines 10-14). Therefore, the method of Pease et al. anticipates the presently claimed method.



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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MY-CHAU T TRAN whose telephone number is 571-272-0810. The examiner can normally be reached on Mon.: 8:00-2:30; Tues.-Thurs.: 7:30-5:00; Fri.: 8:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ANDREW WANG can be reached on 571-272-0811. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mct  
May 27, 2004

  
PADMASHRI PONNALURI  
PRIMARY EXAMINER